Index

All-American Canal, 127, 152–3.
American Desert, 97–9.
All-American Route, 69–70.
Alluvial valley of the Mississippi flood area, 39; plan for flood control of, 37–8.
Arkansas River, 2.

Baldwin, Mrs. Harris T. The Public Service of Muscle Shoals, 172–6.
Blue grass region, 7.
Book Department, 177–84.
Boulder Canyon Dam Bill, facts misrepresented in, 133–4.
Boulder Canyon Project, The. Hiram W. Johnson, 150–6.
Boulder Canyon Project: cost of, 106; financial scheme of, 131; national advantages of, 130–1; opposition to, 123–4; the objectors to, 131–2.
Boulder Canyon Reservoir: 123; salt deposits in, 125–6.
Boulder Dam, Engineering and Economic Features of the. E. F. Scattergood, 115–22.
Boulder Dam, The Company Point of View Regarding. C. Wellington Koiner, 141–2.
Boulder Dam: a hydro-electric power project, 136; actual provision as to power at, 155; cheaper power at, 124; construction of uncertain, 111–2; danger of proposed legislation for, 134–8; financial feasibility of, 121; opposition of the power monopoly to, 154; reasons for development of, 127–30; service of, 151–2; significance to the nation, 121–2; significance to southwestern United States, 121; size of hydro-electric power plant at, 137; special authority for the construction of, 148–0; states rights challenged by proposed legislation for, 138; will furnish water for irrigation in Arizona, California and Nevada, 130; will prevent water shortage in southern California, 153.
Boulder Dam Project Means to California and to the Nation, What the. Clyde L. Seavey, 127–32.
Boulder Dam Project, My Objections to the. E. O. Leatherwood, 133–40.
Boulder Dam Project: danger of, 133; general description of, 118–9.
Boulder Site, relative advantages of, 123–6.

California, what Boulder Dam means to, 127–32.
Canal, all-American, 120.
Canalization of the St. Lawrence, 60.
Channels of the Great Lakes, improvement of, 72–3.
Colorado Basin, 97.
Colorado River and Basin, The Salient Geographic Factors of the. Henry F. James, 97–107.
Colorado River, Federal Water Rights in the. Ottomar Hamele, 143–9.
Colorado River, Problems of the. Arthur P. Davis, 123–6.
Colorado River: 100; a source of water supply for cities of southern California, 129; federal government has no right of authority over, 139–40; flood magnitude of, 115; flood menace and damage from, 116; flood menace of, 102; irrigation from, 103; necessity for storing water of, 101; position of the federal government as to the waters of, 144; potential power possibilities of, 101; power development on, 106; problem of storage and regulation of water, 104–5.
Colorado River Basin, map of, 98.
Colorado River Compact: 143; importance of, 108; legal background of, 109.
Colorado River Development, Legal Problems in. Reuel L. Olson, 108–14.
Colorado River development: government plans for, 118; interstate commission for, 110–11; state autonomy and, 135.
Cyanamid, increased use of, 170.

Davis, Arthur P. Problems of the Colorado River, 123–6.
Davis, R. O. E. Muscle Shoals, Nitrogen and Farm Fertilizers, 157–65.
Delano, Frederic A. The Report of the Committee on Mississippi Flood Control Appointed by the U. S. Chamber of Commerce, 25–34.
Desert land act, 146.
Docking, difficulties of on the Mississippi, 10, 11.
Drainage works, 40.

Engineering Problems, application of science to, 50.
Erosion, 48, 57.
Europe a market for products of the mid-west, 86.
Expenditures by the U. S. government on levee construction, 41.

Farmer, economic handicap of, 93.
Federal waters, grant of, 145.
Fertilizer, development of new materials for, 162.
Flood Control of the Mississippi in Its Alluvial Valley, The Plan for. Edgar Jadwin, 35–44.

Flood Control: 14; economic necessity for, 39; history of in the Mississippi Valley, 30; local coöperation in, 39; Mississippi, 15; need for federal responsibility in, 31; of Mississippi's tributaries, 37; part of cost local interests should pay, 42; part of cost the United States should pay, 42; recommendations for by committee appointed by the U. S. Chamber of Commerce, 26; report of the U. S. Chamber of Commerce Committee on, 27–33.
Flood Control of the Mississippi: essential features of plan for, 35; estimated cost of complete plan, 36.
Flood elements in the Mississippi River, 29.
Flood Frequency in the Lower Mississippi River, Basic Factors in. Lewis F. Thomas, 1–6.
Flood menace of the Colorado River, 102.
Flood of 1927: 45; amount of direct damage by, 41.
Flood protection, appropriations for, 32.
Floods: causes of, 4–5; conclusion as to causes of, 6; data on, 3; frequency of severe, 4; magnitude of, 115; menace and damage from, 116; occurrence of severe, 3.
Forests: amount of silt reduced by, 38; moisture retained by, 47; what they can do for the Mississippi River, 45.

Glenn Canyon Project, 125.
Gorges: enlarging channel to prevent ice, 78; methods of preventing ice, 78–9.
Gray, Chester H. Nitrogen at Muscle Shoals, 56–71.
Great Lakes, a mighty inland waterway, 19; tonnage carried on, 89.
Great Lakes-St. Lawrence Tidewater Association, 91.

Haefele, Ottomar. Federal Water Rights in the Colorado River, 143–9.
Harding, W. L. What the St. Lawrence Waterway Means to the United States, 85–90.
Hoover Commission report on the St. Lawrence Waterway, quotations from, 92.
Hoover, Herbert. The Improvement of Our Mid-West Waterways, 15–24.
Hoover, Herbert, quoted, 142.
Hoover report on the St. Lawrence Shipway, synopsis of, 68–71.
Hydro-electric power at Boulder Dam, 37.

Imperial Valley: 115; flood danger of the Colorado River to, 152; flood danger to, 127–8; irrigation water needed for, 152; shortage of water in, 129.
International trade, 86–7.
Irrigated and irrigable areas in the Colorado Basin in 1922, 104.
Irrigation: Mexican situation and, 117; problems of, 105; use of Colorado River for, 103.
Irrigation Act, the national, 146–7.
Irrigation development, doubtful necessity for further, 105–6.

Jadwin, Edgar. The Plan for Flood Control of the Mississippi River in Its Alluvial Valley, 35–44.
Johnson, Hiram W. The Boulder Canyon Project, 150–6.
Joint Board of Engineers: plan for improvement of various sections of the St. Lawrence, 80–4; their conclusion on the development of the St. Lawrence Waterway, 84.

Koiner, C. Wellington. The Company Point of View Regarding Boulder Dam, 141–2.

Laboratories, use for hydraulic, 54.
Lachine section of the St. Lawrence, 82.
Lake Ontario-Hudson route, 69.
League of women voters and Muscle Shoals, 173.
Leatherwood, E. O. My Objections to the Boulder Dam Project, 133–40.
Lenroot, I. L. The Economic and National Significance of Connecting the Great Lakes with the Sea by the St. Lawrence Route, 91–6.
Levee construction, amount expended on, 41.
Levees Only policy, 53.
Los Angeles: domestic water needed for, 117; increased water supply needed, 128–9.

Marshall, Justice, quoted, 139.
Miller, John B., quoted, 141.
Mississippi, A Policy for the. Arthur E. Morgan, 50–6.
Mississippi, causes of the great flood, 15.
Mississippi Drainage Basin, 34.
Mississippi Drainage System, 7.
Mississippi flood conditions, 29.
Mississippi Flood Control Appointed by the U. S. Chamber of Commerce, The Report of the Committee on. Frederic A. Delano, 25–34.
Mississippi flood control: 15, 28; how the problem must be attacked, 32; inadequacy of a hasty survey, 56; necessity for, 30; legal necessities for, 55; summary of, 43–4.
Mississippi River, What Forests Can do for the. E. A. Sherman, 45–9.
Mississippi River Basin, 1.
Mississippi River: channel difficult to maintain, 9; commerce on, 8; danger caused by changes in the channel, 12; description of, 9–10; drainage basin, 13; flood control of, 14; flood frequency in, 1; kind of commission needed for, 59; Lower, 2; the upper, 1.
Mississippi River Project, rule-of-thumb methods in the, 51.

MISSISSIPPI VALLEY, THE GEOGRAPHY OF THE. Frank E. Williams, 7–14.
Mississippi Valley: population of, 7; products of, 7; topographic features of, 7.
Mississippi's tributaries, flood control of, 37.
Missouri Basin, 2.
Missouri River, 1.
Mohave Canyon, proposed dam at, 124.
MORGAN, ARTHUR E. A Policy for the Mississippi, 50–6.
MUSCLE SHOALS, NITROGEN AND FARM FERTILIZERS. R. O. E. Davis, 157–65.
MUSCLE SHOALS, THE PUBLIC SERVICE OF. Mrs. Harris T. Baldwin, 172–6.
Muscle Shoals: an aid to navigation, 175; a war legacy, 172; Congressional activity on, 172–3; how to get nitrogen at, 171; league of women voters and, 173; government operation of, 175; power at, 166; power from, 174; power plants at, 163; the situation at, 164–5; type of legislation needed for, 166–7.

Navigation: difficulties of on the Mississippi, 10; improvement of on the St. Lawrence, 76; muscle shoals aid to, 175; of the Tennessee, 166.
Navigation routes, comparison of restricted, 70.
NITROGEN AT MUSCLE SHOALS. Chester H. Gray: 166–71.
Nitrogen: and farm fertilizers, 157; atmospheric fixation processes of, 159; fixation, 167; improvement of processes for fixing, 170–1; in nature, 157; obtained by various processes, 167–9; situation at the beginning of the World War, 159; the cyanamid process for fixing, 169–70; the present situation, 160; world production of fixed, 161.
Nitrogenous materials, sources of, 158.
North American mid-continent, 85–6.

Ohio River: 2; flood frequency in, 4.
OLSON, REUEL L. Legal Problems in Colorado River Development, 108–14.

Precipitation in various regions, 5–6.
PILLSBURY, G. B. Engineering Aspects of the St. Lawrence Waterway, 72–84.
PINCHOT, GIFFORD. Some Essential Principles of Water Conservation, 57–9.
Power and waterway developed simultaneously, economy of, 62.
Power: at Muscle Shoals, 164–6; cheaper at Boulder Dam, 124; developed on the St. Lawrence, 95; hydro-electric, 119; relation of Muscle Shoals plants to, 163.
Power development: 106–7; on the St. Lawrence, 62, 69, 76–7.
Power lobby, menace of, 156.
Power monopoly, opposition of, 154.
Reclamation: of Imperial Valley, 115; other projects, 116.
Red River, 2.
Reservoirs, 30.
Ritter, Alfred H., quoted, 94.
Rivers and harbors act, 68.
River traffic, possibilities for great increase in, 19.
River transportation, reasons for decline of, 9.

SCATTERGOOD, E. F. Engineering and Economic Features of the Boulder Dam, 115–22.
SEAVEY, CLYDE L. What the Boulder Dam Project Means to California and to the Nation, 127–32.
SHERMAN, E. A. What Forests Can Do for the Mississippi River, 45–9.
Silt: 115; effect on volume of a stream, 48; forests reduce burden of, 38–9.
Soil: conservation of, 57; erosion of, 48.
Soulanges section of the St. Lawrence, 81.
St. Lawrence: demand for a ship channel by way of, 85; cost of improvement of, 83, 73–4; improvement of navigation on, 76; power developed on, 95, 76.
St. Lawrence Project: cost of development of the international section, 66; Lachine Rapids division of, 61; total estimated cost of improvement, 66.
St. Lawrence River: Barnhart Island development, 64–5; effect of deepening channel, 20; international section, 54; map of, 60, 63; power development on, 69–70.
ST. LAWRENCE ROUTE, THE ECONOMIC AND NATIONAL SIGNIFICANCE OF CONNECTING THE GREAT LAKES WITH THE SEA BY THE. I. L. Lenroot, 91–6.
St. Lawrence Route: 69–70; conclusions of the New England Committee on, 92; economic significance of, 93; saving to the farmer in transportation costs, 94.
ST. LAWRENCE SHIPWAY, A SYNOPSIS OF THE HOOVER REPORT ON THE. Fayette S. Warner, 68–71.
St. Lawrence Shipway, The: economic benefits from development of, 68–9; conclusions of the commission on, 71.
ST. LAWRENCE WATERWAY, ENGINEERING ASPECTS OF THE. G. B. Pillsbury, 72–84.
ST. LAWRENCE WATERWAY MEANS TO THE UNITED STATES, WHAT THE. W. L. Harding, 85–90.
St. Lawrence Waterway: conclusions of the joint board of engineers on, 84; enhances national economy, 87–8; international joint commission on, 91–2; international rapids section, 79–80; joint board of engineers on, 74; objectors to, 96; purpose of, 72; report of the board of engineers on, 74–6; Soulanges section of, 81–2.

St. Lawrence Waterway Project, The. Fayette S. Warner, 60–7.
St. Lawrence Waterway Project from the engineering point of view, 60.
States Rights challenged by Boulder Dam legislation, 138.
State autonomy, 135–8.
Streamflow regulation: dams to assist, 47; influence of forests on, 46–7.
Streams, erosive power of, 46–7.
Swamp Act, 40.
Swing-Johnson Bill, 130–1, 141.

Thomas, Lewis F. Basic Factors in Flood Frequency in the Lower Mississippi River, 1–6.
Transportation: ocean rates, 17; reasons for decline of river, 9; remedy for high rates, 18; Tennessee River a project of, 166; the farmer's problem of, 17.

United States Merchant Marine, development aided by the St. Lawrence route, 95.
Upper Yazoo district, successful protection of, 52.

Warner, Fayette S. A Synopsis of the Hoover Report on the St. Lawrence Shipway, 68–71.
Warner, Fayette S. The St. Lawrence Waterway Project, 60–7.
Water conservation principles, 58.
Water, war of western, 43.
Water conservation as applied to Mississippi flood control, 57.
Water Conservation, Some Essential Principles of. Gifford Pinchot, 57–9.
Water resources, need for a national organization to develop, 21–2.
Water rights conservancy districts, 112–4.
Waterway development, opposition to, 20–1.
Waterways, The Improvement of Our Mid-West. Herbert Hoover, 15–24.
Waterways: development of, 123–4; inland, 16; plan for development of inland, 18.
Welland Canal, old and new, 73.
Williams, Frank E. The Geography of the Mississippi Valley, 7–14.
Work, Herbert, quoted, 118.